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ZCAPLUS
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
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NEWS 10 Jun 10 MEDLINE Reload
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NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
saved answer sets no longer valid
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NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 09 JAPIO to be reloaded August 18, 2002

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,
CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
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NEWS PHONE Direct Dial and Telecommunication Network Access to STN
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FILE 'HOME' ENTERED AT 13:47:02 ON 14 AUG 2002

=> file reg	COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST		0.21	0.21

FILE 'REGISTRY' ENTERED AT 13:47:20 ON 14 AUG 2002
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STRUCTURE FILE UPDATES: 13 AUG 2002 HIGHEST RN 443862-53-1
DICTIONARY FILE UPDATES: 13 AUG 2002 HIGHEST RN 443862-53-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e phosphonomethylglycine/cn
E1 1 PHOSPHONOMETHYL GLYCINAMIDE/CN
E2 1 PHOSPHONOMETHYL-PHENYLALANINE/CN
E3 1 --> PHOSPHONOMETHYLGLYCINE/CN
E4 1 PHOSPHONOMETHYLIMINOACETIC ACID/CN
E5 1 PHOSPHONOMETHYLIMINODIACETIC ACID/CN
E6 1 PHOSPHONOMUTASE 2 (ESCHERICHIA COLI O157:H7 STRAIN EDL933
GE NE PRPB) /CN
E7 1 PHOSPHONOMUTASE 2 (ESCHERICHIA COLI STRAIN O157:H7 GENE
ECS0 385) /CN
E8 1 PHOSPHONOMUTASE, CARBOXYPHOSPHONOENOLPYRUVATE/CN
E9 1 PHOSPHONOMUTASE, CARBOXYPHOSPHONOENOLPYRUVATE
(PHYSCOMITRELL A PATENS CLONE 88 MM13 G11REV FRAGMENT) /CN
E10 1 PHOSPHONOMUTASE, CARBOXYPHOSPHONOENOLPYRUVATE
(STREPTOMYCES HYGROSCOPICUS CLONE PBS-BAM3 SUBUNIT REDUCED) /CN
E11 1 PHOSPHONOMUTASE, CARBOXYPHOSPHONOENOLPYRUVATE
(STREPTOMYCES HYGROSCOPICUS CLONE PMSB113 REDUCED) /CN
E12 1 PHOSPHONOMUTASE, CARBOXYPHOSPHONOENOLPYRUVATE (SULFOLOBUS
SO LFATARICUS GENE PRPB) /CN
=> e3
L1 1 PHOSPHONOMETHYLGLYCINE/CN
=> d 11

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
 RN 1071-83-6 REGISTRY
 CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN (Carboxymethylamino)methylphosphonic acid
 CN Accord
 CN Carboxymethylaminomethanephosphinic acid
 CN Folusen
 CN Forsat
 CN Glialka
 CN Glialka 36
 CN Glyphodin A
 CN Glyphosate
 CN Glyphosate CT
 CN Herbatop
 CN Hockey
 CN Lancer
 CN MON 2139
 CN MON 6000
 CN N-Phosphomethylglycine
 CN N-Phosphonomethylglycine
 CN Phorsat
 CN **Phosphonomethylglycine**
 CN Phosphonomethyliminoacetic acid
 CN Rebel Garden
 FS 3D CONCORD
 DR 37337-60-3, 75241-08-6, 42618-09-7
 MF C3 H8 N O5 P
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPIUS, CASREACT, CBNB, CEN,
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU,
 EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*,
 MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT,
 USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4180 REFERENCES IN FILE CA (1967 TO DATE)
 238 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 4182 REFERENCES IN FILE CAPIUS (1967 TO DATE)
 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus	COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST		5.96	6.17

FILE 'CAPIUS' ENTERED AT 13:48:07 ON 14 AUG 2002

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FILE COVERS 1907 - 14 Aug 2002 VOL 137 ISS 7
FILE LAST UPDATED: 13 Aug 2002 (20020813/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> 11

L2 4182 L1

=> mother liquor

49791 MOTHER
11187 MOTHERS
58233 MOTHER

(MOTHER OR MOTHERS)

81540 LIQUOR

30806 LIQUORS

97577 LIQUOR

(LIQUOR OR LIQUORS)

L3 29429 MOTHER LIQUOR

(MOTHER(W) LIQUOR)

=> 12 and 13

L4 2 L2 AND L3

=> d 14 1-2 ti

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

TI Method for producing N-(phosphonomethyl)glycine

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

TI Analytical control of the production of herbicides and growth regulators
glyphosate and glyphosine by capillary isotachophoresis

=> d 14 ti fbib abs

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

TI Method for producing N-(phosphonomethyl)glycine

AN 2001:618009 CAPLUS

DN 135:180876
 TI Method for producing N-(phosphonomethyl)glycine
 IN Hitzler, Martin; Thalhammer, Franz; Hammer, Benedikt
 PA Skw Trostberg Aktiengesellschaft, Germany
 SO PCT Int. Appl., 24 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001060830	A1	20010823	WO 2001-EP1749	20010216
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
				DE 2000-10007702A	20000219
	DE 10007702	A1	20010823	DE 2000-10007702	20000219
OS	CASREACT 135:180876				
AB	The invention relates to a method for producing N-(phosphonomethyl)glycine involving the following steps: (a) oxidizing N-(phosphonomethyl)iminodiacetic acid (PMIDA) with peroxides or oxygen in an aq. medium and in the presence of a heterogeneous catalyst at a temp. ranging from 50 to 150.degree.; (b) subsequently sepg. the solid catalyst out of the aq. reaction suspension of step (a); (c) concg. the clear reaction soln. from step (b), esp. by evapn., and; (d) sepg. the N-(phosphonomethyl)glycine out of the concd. reaction soln. from step (c), esp. by filtration. According to the invention, the aq. reaction soln. from step (d) (mother liquor) is returned with small amts. of N-(phosphonomethyl)glycine and byproducts to step (b) (catalyst sepn.) and/or to step (c) (concn.). This results in distinctly increasing the yield with a const. product purity and in noticeably reducing the amt. of mother liquor .				
RE.CNT 5	THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT				

=> d 14 2 ti fbib abs

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
 TI Analytical control of the production of herbicides and growth regulators
 glyphosate and glymosine by capillary isotachophoresis
 AN 1986:179483 CAPLUS
 DN 104:179483
 TI Analytical control of the production of herbicides and growth regulators
 glyphosate and glymosine by capillary isotachophoresis
 AU Krivankova, Ludmila; Bocek, Petr
 CS Inst. Anal. Chem., Czech. Acad. Sci., Brno, CS-611 42, Czech.
 SO Electrophoresis (Weinheim, Fed. Repub. Ger.) (1986), 7(2), 100-3

CODEN: ELCTDN; ISSN: 0173-0835
 DT Journal
 LA English
 AB A method is described for direct anal. of the reaction mixts. of the prodn. of the herbicide glyphosate and the growth regulator glyphonosine by capillary isotachophoresis providing simultaneous detn. of the products N-(phosphonomethyl)glycine and N,N-bis(phosphonomethyl)glycine as well as of all important reaction components - sulfuric, formic, phosphorous, phosphoric, hydroxyacetic, nitrilotriacetic, iminodiacetic and N-phosphonomethyliminodiacetic acids and glycine. The method is suitable for the analyses both of the final products and of **mother liquors**, where the max. ratio of the concns. ranges within 1:100. The time of anal. is dependent on the sample compn. and ranges within 5-20 min, relative std. deviation of a single detn. being <4%.

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	9.98	16.15
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.24	-1.24

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 DICTIONARY FILE UPDATES: 13 AUG 2002 HIGHEST RN 443862-53-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e glycine/cn

E1	1	GLYCINATOSERINATOCOPPER/CN
E2	1	GLYCINATOZINC ACETATE/CN
E3	1	--> GLYCINE/CN
E4	1	GLYCINE (-)-MENTHYL ESTER/CN
E5	1	GLYCINE (2,3,4-TRIHYDROXYBENZYL)HYDRAZIDE HYDROCHLORIDE/CN
E6	1	GLYCINE (N-L-VALYL-), PROPYL ESTER, TARTRATE, DI-P-TOLUATE/CN
		N
E7	1	GLYCINE .BETA.-NAPHTHYLAMIDE/CN
E8	1	GLYCINE 1-METHYL-1-HEPTYL ESTER/CN
E9	1	GLYCINE 2,4,5-TRICHLOROPHENYL ESTER HYDROBROMIDE/CN
E10	1	GLYCINE 2,4,6-TRIMETHYLBENZYL ESTER MONOHYDROCHLORIDE/CN

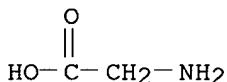
E11 1 GLYCINE 2,6-XYLIDIDE HYDROCHLORIDE/CN
E12 1 GLYCINE 2-(BENZYLOXYCARBONYL) HYDRAZIDE TRIFLUOROACETATE/CN

=> e3

L5 1 GLYCINE/CN

=> d 15

L5 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 56-40-6 REGISTRY
CN Glycine (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2-Aminoacetic acid
CN Acetic acid, amino-
CN Aciport
CN Aminoacetic acid
CN Aminoethanoic acid
CN Glicoamin
CN Glycocol
CN Glycolixir
CN Glycosthene
CN Padil
FS 3D CONCORD
DR 57678-19-0, 87867-94-5, 52955-63-2
MF C2 H5 N O2
CI COM
LC STN Files: ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX,
CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU,
EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,
MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PROMT, RTECS*, SPECINFO,
SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

39121 REFERENCES IN FILE CA (1967 TO DATE)
2597 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
39180 REFERENCES IN FILE CAPLUS (1967 TO DATE)
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus		SINCE FILE	TOTAL
COST IN U.S. DOLLARS		ENTRY	SESSION
FULL ESTIMATED COST		5.96	22.11
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)		SINCE FILE	TOTAL

CA SUBSCRIBER PRICE

ENTRY SESSION
0.00 -1.24

FILE 'CAPLUS' ENTERED AT 13:50:43 ON 14 AUG 2002
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FILE COVERS 1907 - 14 Aug 2002 VOL 137 ISS 7
FILE LAST UPDATED: 13 Aug 2002 (20020813/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> 15
L6 39300 L5

=> d his

(FILE 'HOME' ENTERED AT 13:47:02 ON 14 AUG 2002)

FILE 'REGISTRY' ENTERED AT 13:47:20 ON 14 AUG 2002
E PHOSPHONOMETHYLGLYCINE/CN
L1 1 E3

FILE 'CAPLUS' ENTERED AT 13:48:07 ON 14 AUG 2002
L2 4182 L1
L3 29429 MOTHER LIQUOR
L4 2 L2 AND L3

FILE 'REGISTRY' ENTERED AT 13:50:15 ON 14 AUG 2002
E GLYCINE/CN
L5 1 E3

FILE 'CAPLUS' ENTERED AT 13:50:43 ON 14 AUG 2002
L6 39300 L5

=> 13 and 16
L7 24 L3 AND L6

=> recycle
24157 RECYCLE
1007 RECYCLES

L8 24934 RECYCLE
(RECYCLE OR RECYCLES)

=> 17 and 18

L9 2 L7 AND L8

=> d 19 1-2 ti fbib abs

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

TI Preparation of glycine

AN 1994:324205 CAPLUS

DN 120:324205

TI Preparation of glycine

IN Ihara, Tatsuya

PA Mitsubishi Chem Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO. KIND DATE

APPLICATION NO. DATE

PI JP 06087803 A2 19940329 JP 1992-264116 19920908

AB Process for prepn. (Strecker synthesis) of glycine involves (1) crystallizing glycine from a reaction liq. obtained by reaction of glyconitrile with CO₂ and NH₃ in the presence of H₂O and isolating glycine crystals, (2) recycling the crystn. **mother liquor** to the reaction system, and (3) also withdrawing a part of the mother liq. outside the system, hydrolyzing it, and recovering glycine from the resulting hydrolyzate liq. Recycling the **mother liquor** increases selectivity for glycine and in spite of the recycling, removing a part of the **mother liquor** prevents accumulation of impurities and thus increases quality of glycine. Selectivity for glycine

also improves, since the purged crystn. **mother liquor** is hydrolyzed for recovering glycine. Overall, the process gives glycine contg. little impurities in high yields with improved selectivity. Thus, a 1:2:2:50 mixt. of glyconitrile, NH₃, CO₂, and H₂O was autoclaved at 165.degree. for 3 h and evapd. under reduced pressure at 80.degree. to give a concd. soln. contg. 30 wt.% glycine. A mixt. of MeOH and H₂O (90:10 vol/vol) was added to the conc. and glycine was crystd. and sepd. in 50.5% yield. A portion of the crystn. **mother liquor** (20%) was concd. to dryness at 80.degree.; the resulting dry solid was autoclaved for hydrolysis with NH₄HCO₃ in H₂O at 165.degree. for 3 h; the hydrolyzate was treated with a mixt. of MeOH and H₂O (90:10 vol/vol) for crystn. to give 2.5% glycine. A total yield of glycine was 53%. The

rest

of the **mother liquor** (80%) was recycled; when this reaction cycle was repeated 10 times, the total yield of glycine gradually

increased and was stabilized at 82.0+-0.5% after 5 reaction cycles. Glycine obtained by both direct crystn. from and hydrolysis of the **mother liquor** was colorless and of good quality.

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

TI Preparation of glycine by reaction of glycolonitrile with ammonia, carbon dioxide, and water

AN 1991:680560 CAPLUS

DN 115:280560
TI Preparation of glycine by reaction of glycolonitrile with ammonia, carbon dioxide, and water
IN Fujiwara, Kenji; Yoshinaga, Susumu; Sakamoto, Toshihiko; Kato, Hiroshi; Hiai, Atsuhiko
PA Mitsui Toatsu Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03193748	A2	19910823	JP 1989-332801	19891225

AB Glycine (I) is prep'd. via hydantoin (II) by reaction of glycolonitrile (III) with a 1.5-1.8 mol ratio of NH₃ and CO₂ in the presence of H₂O and then reaction of the resulting reaction soln. with higher mol. ratio of NH₃ and CO₂ than that in the previous step. The 2 step reaction increases

the yields of I as well as the products convertible to I. **Recycle** of the **mother liquor** contg. byproducts such as I, II, H-(Gly)n-OH (n = 2, 3), hydantoic acid, hydantoic acid amide, and 2,5-diketopiperazine after crystn.-sepn. of I favorably shifts the equil. to the side of I and further increases the yield of I to .gtoreq. 80%

while

one step reaction without **recycle** gives I in .apprx.60% at the most. Thus, a stirred aq. soln. contg. 50 wt.% III 2.42, NH₃ 10.9, and CO₂ 7.3 mol was supplied at 2084 g/h to a series of first reactor (2 L) and the second reactor (10 L) while feeding 20% aq. NH₃ (3.9 mol) at 307 g/h to the outlet pipe of the first reactor. The reaction was carried

out

at 150.degree. and 50 kg/cm² for av. 0.94 and 4.17 h in the first and the second reactor, resp., while maintaining the H₂O-NH₃-CO₂-III mol ratio of 42:4.5:3:1 and 45:6:3:1, resp. in the two reactors. When it reached the steady state, H₂O, NH₃, and CO₂ were removed by condensation and the **mother liquor** obtained by removing I of 98.4% purity at 0.97 mol/h was recycled to give, after 24 h operation, 1.81 kg I (89.2% based on III).

=> d his

(FILE 'HOME' ENTERED AT 13:47:02 ON 14 AUG 2002)

FILE 'REGISTRY' ENTERED AT 13:47:20 ON 14 AUG 2002
E PHOSPHONOMETHYLGLYCINE/CN

L1 1 E3

FILE 'CAPLUS' ENTERED AT 13:48:07 ON 14 AUG 2002

L2 4182 L1
L3 29429 MOTHER LIQUOR
L4 2 L2 AND L3

FILE 'REGISTRY' ENTERED AT 13:50:15 ON 14 AUG 2002
E GLYCINE/CN

L5 1 E3

FILE 'CAPLUS' ENTERED AT 13:50:43 ON 14 AUG 2002
L6 39300 L5

L7 24 L3 AND L6
L8 24934 RECYCLE
L9 2 L7 AND L8

=> 12 and 16
L10 113 L2 AND L6

=> crystalliz?
138875 CRYSTALLIZ?
78532 CRYSTD
78532 CRYSTD
(CRYSTD)
15548 CRYSTG
192580 CRYSTN
2182 CRYSTNS
193852 CRYSTN
(CRYSTN OR CRYSTNS)
L11 319266 CRYSTALLIZ?
(CRYSTALLIZ? OR CRYSTD OR CRYSTG OR CRYSTN)

=> 110 and 111
L12 3 L10 AND L11

=> d 112 1-3 ti

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Preparation of N-phosphomethylglycine
L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI A method for the preparation of n-phosphonomethylglycine
L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Process for the preparation of the herbicide N-(phosphonomethyl)glycine

=> d 112 1-3 ti fbib abs

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Preparation of N-phosphomethylglycine
AN 1995:367538 CAPLUS
DN 122:133414
TI Preparation of N-phosphomethylglycine
IN Jaron, Antoni W.; Jasik, Marta; Kaczorowski, Krzysztof; Koperska, Miroslawa; Kwiatkowski, Marian; Petryka, Marek; Wyrzykowska, Urszula
PA Instytut Przemyslu Organicznego, Pol.
SO Pol., 3 pp.
CODEN: POXXA7
DT Patent
LA Polish
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	PL 159424	B1	19921231	PL 1989-278966	19890418
AB	The title compd. is prep'd. by reaction of glycine with formalin in a strongly basic aq. medium at 273-283 K, followed by addn. of a trialkyl phosphite to the resulting N-hydroxymethylglycinate salt and heating to 323 K, after which the dialkyl ester is hydrolyzed with mineral acid such that the synthesis is performed in a cascade of 2 reactors operating continuously wherein the sodium N-hydroxymethylglycinate is obtained in				

2-20 min, preferably 5.5 min at 273-278 K, in the first reactor, and in the second reactor this salt reacts with tri-Et phosphite over 1-10 min, preferably 2.7 min at 363-368 K to give sodium N-diethylphosphonomethylglycinate with simultaneous removal of ethanol, and then after acidification with hydrochloric acid the reaction mixt. is filtered to sep. the sodium chloride ppt. and the acidic residue is distd., taken to pH 1.9-2.1, and **crystd.** Thus, in the example given, a 38% aq. soln. of sodium glycinate reacts with 33% formalin in the first reactor at 272-278 K for 5.5 min, and then in the second reactor which is maintained at 363-367 K the mixt. reacts 2.7 min with (EtO)3P preheated to 353-358 K; the reactants are used in a 1:1:1 mol ratio.

L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
 TI A method for the preparation of n-phosphonomethylglycine
 AN 1991:122716 CAPLUS
 DN 114:122716
 TI A method for the preparation of n-phosphonomethylglycine
 IN Donadello, Graziello
 PA Finchimica S.p.A., Italy
 SO Eur. Pat. Appl., 5 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 402887	A1	19901219	EP 1990-111169	19900613
	EP 402887	B1	19940907		
	EP 402887	B2	20001004		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE			IT 1989-67489	A 19890615
	ES 2059892	T3	19941116	ES 1990-111169	19900613
				IT 1989-67489	A 19890615
	FR 2648460	A1	19901221	FR 1990-7435	19900614
	FR 2648460	B1	19940204		
				IT 1989-67489	A 19890615
	US 5041628	A	19910820	US 1990-537652	19900614
				IT 1989-67489	A 19890615
OS	CASREACT 114:122716				
AB	Glyphosate (I) was prep'd. by 1) treatment of glycine with a soln. of H ₂ CO in H ₂ O/alc. in the presence of a alkali- or alk. earth hydroxide, 2) treatment of the resulting mixt. with a trialkyl phosphate, and 3) hydrolysis and recrystn. Thus, a mixt. of glycine, H ₂ CO, and NaOH in H ₂ O/MeOH was heated at 60.degree. for 15 min; (MeO)3P was added over 1 h and the resulting mixt. was refluxed 2.5 h. The cooled mixt. was treated with concn. HCl followed by filtration, repeated distn., and crystn. from H ₂ O to give I.				

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI ES 553523	A3	19870701	ES 1986-553523 HU 1974-2251	19860331 19740627
AB	The herbicide $(HO)_2P(O)CH_2NHCH_2CO_2H$ (I) is prep'd. from HCHO, glycine, and either di-Me or di-Et phosphite. A stirred mixt. of 15 mL 35% aq. HCHO and 55 mL 2N NaOH was treated with 7.5 g glycine, stirred 10 min, treated with 10.7 g di-Me phosphite, and kept at 100. degree. for 2 h. Cooling and neutralization gave an oil contg. $(MeO)_2P(O)CH_2NHCH_2CO_2H$, which was refluxed in 100 mL 6N HCl for 5 h. Evapn., crystn. from EtOH, and recrystn. from aq. MeOH gave 60% yield of pure I.			

```
=> save temp all glyphsrch/a
'GLYPHOSRCH/A' IS NOT ALLOWED WITH ALL
The saved name of an L# list must end with '/L'.
```

=> save temp all glyphosrch/l
L# LIST L1-L12 HAS BEEN SAVED AS 'GLYPHOSRCH/L'

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:05:23 ON 14 AUG 2002

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: ssspta1623paz

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 3 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4 Apr 09 ZDB will be removed from STN
NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and
IFIUDB
NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and
ZCAPLUS
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 9 Jun 03 New e-mail delivery for search results now available

NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
 saved answer sets no longer valid
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 09 JAPIO to be reloaded August 18, 2002

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,
 CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
 AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002

NEWS HOURS STN Operating Hours Plus Help Desk Availability

NEWS INTER General Internet Information

NEWS LOGIN Welcome Banner and News Items

NEWS PHONE Direct Dial and Telecommunication Network Access to STN

NEWS WWW CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 09:16:39 ON 17 AUG 2002

=> file req

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> file req

COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
0.21	0.21

FILE 'REGISTRY' ENTERED AT 09:16:49 ON 17 AUG 2002

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STRUCTURE FILE UPDATES: 15 AUG 2002 HIGHEST RN 444046-42-8
DICTIONARY FILE UPDATES: 15 AUG 2002 HIGHEST RN 444046-42-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e glyphosate/cn

E1	1	GLYPHOS/CN
E2	1	GLYPHOS, (+)-/CN
E3	1	--> GLYPHOSATE/CN
E4	1	GLYPHOSATE C-P LYASE/CN
E5	1	GLYPHOSATE CT/CN
E6	1	GLYPHOSATE DIAMMONIUM SALT/CN
E7	1	GLYPHOSATE DIMETHYLAMINE SALT/CN
E8	1	GLYPHOSATE ISOPROPYLAMINE/CN
E9	1	GLYPHOSATE ISOPROPYLAMINE SALT/CN
E10	1	GLYPHOSATE ISOPROPYLAMINE-OXYFLUORFEN MIXT./CN
E11	1	GLYPHOSATE MONO(DIMETHYLAMINE) SALT/CN
E12	1	GLYPHOSATE MONO(DIMETHYLMONIUM) SALT/CN

=> e3

L1 1 GLYPHOSATE/CN

=> d 11

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 1071-83-6 REGISTRY
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (Carboxymethylamino)methylphosphonic acid
CN Accord
CN Carboxymethylaminomethanephosphinic acid
CN Folusen
CN Forsat
CN Glialka
CN Glialka 36
CN Glyphodin A
CN **Glyphosate**
CN Glyphosate CT
CN Herbatop
CN Hockey
CN Lancer
CN MON 2139
CN MON 6000
CN N-Phosphomethylglycine
CN N-Phosphonomethylglycine
CN Phorsat
CN Phosphonomethylglycine
CN Phosphonomethyliminoacetic acid
CN Rebel Garden
FS 3D CONCORD
DR 37337-60-3, 75241-08-6, 42618-09-7
MF C3 H8 N O5 P
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,

BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DDFU, DRUGU, EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4182 REFERENCES IN FILE CA (1967 TO DATE)
238 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4187 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus	COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST		5.96	6.17

FILE 'CAPLUS' ENTERED AT 09:17:27 ON 17 AUG 2002
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FILE COVERS 1907 - 17 Aug 2002 VOL 137 ISS 8
FILE LAST UPDATED: 16 Aug 2002 (20020816/ED)

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CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> l1
L2 4187 L1

=> adiabatic crystallization
37870 ADIABATIC

51 ADIABATICS
37904 ADIABATIC
 (ADIABATIC OR ADIABATICS)
86653 CRYSTALLIZATION
 111 CRYSTALLIZATIONS
86715 CRYSTALLIZATION
 (CRYSTALLIZATION OR CRYSTALLIZATIONS)
192698 CRYSTN
 2182 CRYSTNS
193970 CRYSTN
 (CRYSTN OR CRYSTNS)
213886 CRYSTALLIZATION
 (CRYSTALLIZATION OR CRYSTN)
L3 15 ADIABATIC CRYSTALLIZATION
 (ADIABATIC(W)CRYSTALLIZATION)

=> 115 and 12

L15 NOT FOUND

The L-number entered could not be found. To see the definition of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> 13 and 12

L4 0 L3 AND L2

=> d 13 1-15 ti

L3 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2002 ACS

TI Multiple crystallization method for the purification of an .alpha.-hydroxycarboxylic acid on an industrial scale

L3 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2002 ACS

TI Extractive and crystallization method for the purification of .alpha.-hydroxycarboxylic acids on an industrial scale

L3 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2002 ACS

TI Paragenetic evolution of cassiterite-bearing lodes at South Crofty mine, Cornwall, United Kingdom

L3 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2002 ACS

TI Regenerating acid baths for coagulating viscose in manufacture of rayon

L3 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2002 ACS

TI Development of high pressure crystallization

L3 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2002 ACS

TI Continuous production of anhydrous crystalline zinc dichloride

L3 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2002 ACS

TI A pilot study of p-cresol crystallization by adiabatic application of high pressure

L3 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2002 ACS

TI Kinetics of the crystallization of nylon 6 in anionic adiabatic polymerization

L3 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2002 ACS

TI Role of **adiabatic crystallization** and progressive melting in the origin of the Younger Granites-Sara-Fier Complex

L3 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2002 ACS
TI Crystallization of pentaerythritol

L3 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2002 ACS
TI An interpretation of the kinetics of nonisothermal crystallization of polymers demonstrated on the **adiabatic crystallization of polycaprolactam**

L3 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2002 ACS
TI Use of the Pomeranchuk effect for obtaining ultra-low temperatures

L3 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2002 ACS
TI Alkaline polymerization of 6-caprolactam. XII. Polymerization of 6-caprolactam and crystallization of the polymer under adiabatic conditions

L3 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2002 ACS
TI Heat calculations for a crystallizer with air cooling

L3 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2002 ACS
TI **Adiabatic crystallization of amorphous polycaprolactam**

=> ejector nozzle
0 EJECTOR
39561 NOZZLE
20814 NOZZLES
50339 NOZZLE
(NOZZLE OR NOZZLES)

L5 0 EJECTOR NOZZLE
(EJECTOR(W)NOZZLE)

=> ejector nozzle
2654 EJECTOR
846 EJECTORS
2999 EJECTOR
(EJECTOR OR EJECTORS)
39561 NOZZLE
20814 NOZZLES
50339 NOZZLE
(NOZZLE OR NOZZLES)

L6 70 EJECTOR NOZZLE
(EJECTOR(W)NOZZLE)

=> l1 and l6
4187 L1
L7 1 L1 AND L6

=> d 17

L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
AN 2001:886139 CAPLUS
DN 136:8084
TI Reaction systems for n-(phosphonomethyl)glycine production
IN Haupfear, Eric; Heise, Jerald; Jorgenson, Amy I.; Rogers, Michael; Chien, Henry; Casanova, Eduardo; Hooper, William B.; Wittler, Kent; Scholle, William; Arhancet, Juan
PA Monsanto Technology, Llc, USA; et al.

SO PCT Int. Appl., 347 pp.
CODEN: PIXXD2

DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001092272	A2	20011206	WO 2001-US10826	20010522
	WO 2001092272	A3	20020516		
	W: AE, AL, AM, AT, AU, AZ, CU, CZ, DE, DK, DM, EC, ID, IL, IN, IS, JP, KE, LV, MA, MD, MG, MK, MN, SG, SI, SK, SL, TJ, TM, ZW, AM, AZ, BY, KG, KZ, RW: GH, GM, KE, LS, MW, MZ, DE, DK, ES, FI, FR, GB, BJ, CF, CG, CI, CM, GA,	BA, BB, BG, BR, BY, CA, KG, KP, KR, KZ, LC, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, MD, RU, TJ, TM SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, GN, GW, ML, MR, NE, SN, TD, TG			
	US 2002068836	A1	20020606	US 2001-863885	20010522
PRAI	US 2000-206562P	P	20000522		
	US 2000-220140P	P	20000721		
	US 2000-230240P	P	20000901		
OS	MARPAT 136:8084				

=> loop reactor
89035 LOOP
34810 LOOPS
112377 LOOP
(LOOP OR LOOPS)
352875 REACTOR
202415 REACTORS
392306 REACTOR
(REACTOR OR REACTORS)
L8 1148 LOOP REACTOR
(LOOP (W) REACTOR)

=> l1 and l8
4187 L1
L9 0 L1 AND L8

=> glycine
115498 GLYCINE
1539 GLYCINES
L10 116166 GLYCINE
(GLYCINE OR GLYCINES)

=> l8 and l10
L11 3 L8 AND L10

=> d 111 1-3 ti

L11 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Effect of additives on gas hold-up and mass transfer in an airlift inner-loop reactor

L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Biological degradation of EDTA: reaction kinetics and technical approach

L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Design and application of an immobilized loop bioreactor for continuous beer fermentation

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 09:21:02 ON 17 AUG 2002

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: ssspta1623paz

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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IFIUDB
NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and
ZCAPLUS
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 9 Jun 03 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
 saved answer sets no longer valid
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 09 JAPIO to be reloaded August 18, 2002

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,
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NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 06:40:07 ON 19 AUG 2002

=> le caplus

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> file caplus

COST IN U.S. DOLLARS

SINCE ELLIE TOTAL

ENTRY

**TOTAL
SESSION**

FULL ESTIMATED COST

ENR

MISSION

FILE 'CAPLUS' ENTERED AT 06:40:19 ON 19 AUG 2002

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FILE COVERS 1907 - 19 Aug 2002 VOL 137 ISS 8
FILE LAST UPDATED: 16 Aug 2002 (20020816/ED)

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```
=> adiabatic
      37870 ADIABATIC
          51 ADIABATICS
L1      37904 ADIABATIC
```

(ADIABATIC OR ADIABATICS)

=> crystall?
380151 CRYSTALL?
290904 CRYST
1793 CRYSTS
292173 CRYST
(CRYST OR CRYSTS)
78562 CRYSTD
15554 CRYSTG
192698 CRYSTN
2182 CRYSTNS
193970 CRYSTN
(CRYSTN OR CRYSTNS)
L2 744445 CRYSTALL?
(CRYSTALL? OR CRYST OR CRYSTD OR CRYSTG OR CRYSTN)

=> l1(1)12
L3 1001 L1(L)L2

=> phosphonomethylglycine
497 PHOSPHONOMETHYLGlycine
35 PHOSPHONOMETHYLGlycines
L4 498 PHOSPHONOMETHYLGlycine
(PHOSPHONOMETHYLGlycine OR PHOSPHONOMETHYLGlycines)

=> l3 and l4
L5 0 L3 AND L4

=> file reg
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 5.67 5.88

FILE 'REGISTRY' ENTERED AT 06:41:38 ON 19 AUG 2002
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STRUCTURE FILE UPDATES: 16 AUG 2002 HIGHEST RN 444143-26-4
DICTIONARY FILE UPDATES: 16 AUG 2002 HIGHEST RN 444143-26-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e glyphosate
E1 1 GLYPHOPIN/BI
E2 631 GLYPHOS/BI
E3 630 --> GLYPHOSATE/BI
E4 1 GLYPHOSIDE/BI

```
E5      1    GLYPHOSINE/BI
E6      3    GLYPHOTHEC/BI
E7      3    GLYPHOTHECIUM/BI
E8      7    GLYPHUS/BI
E9      1    GLYPHYL/BI
E10     1    GLYPHYLLIN/BI
E11     1    GLYPHYLLINE/BI
E12     32   GLYPICAN/BI
```

=> e glyosate/cn

```
E1      1    GLYPHOS/CN
E2      1    GLYPHOS, (+)-/CN
E3      1 --> GLYPHOSATE/CN
E4      1    GLYPHOSATE C-P LYASE/CN
E5      1    GLYPHOSATE CT/CN
E6      1    GLYPHOSATE DIAMMONIUM SALT/CN
E7      1    GLYPHOSATE DIMETHYLAMINE SALT/CN
E8      1    GLYPHOSATE ISOPROPYLAMINE/CN
E9      1    GLYPHOSATE ISOPROPYLAMINE SALT/CN
E10     1    GLYPHOSATE ISOPROPYLAMINE-OXYFLUORFEN MIXT./CN
E11     1    GLYPHOSATE MONO(DIMETHYLAMINE) SALT/CN
E12     1    GLYPHOSATE MONO(DIMETHYLAMMONIUM) SALT/CN
```

=> e3

```
L6      1    GLYPHOSATE/CN
```

=> d 1

'L' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG	- RN
SAM	- Index Name, MF, and structure - no RN
FIDE	- All substance data, except sequence data
IDE	- FIDE, but only 50 names
SQIDE	- IDE, plus sequence data
SQIDE3	- Same as SQIDE, but 3-letter amino acid codes are used
SQD	- Protein sequence data, includes RN
SQD3	- Same as SQD, but 3-letter amino acid codes are used
SQN	- Protein sequence name information, includes RN
CALC	- Table of numeric properties
PROP	- Same as CALC
ABS	-- Abstract
APPS	-- Application and Priority Information
BIB	-- CA Accession Number, plus Bibliographic Data
CAN	-- CA Accession Number
CBIB	-- CA Accession Number, plus Bibliographic Data (compressed)
IND	-- Index Data
IPC	-- International Patent Classification
PATS	-- PI, SO
STD	-- BIB, IPC, and NCL
IABS	--ABS, indented, with text labels

IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ENTER DISPLAY FORMAT (IDE):end

=> d11
L7 17 DL1

=> d 11
YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS' - CONTINUE? (Y)/N:n

=> d 16

L6 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 1071-83-6 REGISTRY
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (Carboxymethylamino)methylphosphonic acid
CN Accord
CN Carboxymethylaminomethanephosphinic acid
CN Folusen
CN Forsat
CN Gialka
CN Gialka 36
CN Glyphodin A
CN **Glyphosate**
CN Glyphosate CT
CN Herbatop
CN Hockey
CN Lancer
CN MON 2139
CN MON 6000
CN N-Phosphomethylglycine
CN N-Phosphonomethylglycine
CN Phorsat
CN Phosphonomethylglycine
CN Phosphonomethyliminoacetic acid

CN Rebel Garden
FS 3D CONCORD
DR 37337-60-3, 75241-08-6, 42618-09-7
MF C3 H8 N O5 P
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DDFU, DRUGU, EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4182 REFERENCES IN FILE CA (1967 TO DATE)
238 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4187 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus	COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST		10.34	16.22

FILE 'CAPLUS' ENTERED AT 06:42:42 ON 19 AUG 2002
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FILE COVERS 1907 - 19 Aug 2002 VOL 137 ISS 8
FILE LAST UPDATED: 16 Aug 2002 (20020816/ED)

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CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

```
=> 16
L8      4187 L6

=> d his

      (FILE 'HOME' ENTERED AT 06:40:07 ON 19 AUG 2002)

      FILE 'CAPLUS' ENTERED AT 06:40:19 ON 19 AUG 2002
L1      37904 ADIABATIC
L2      744445 CRYSTALL?
L3      1001 L1(L) L2
L4      498 PHOSPHONOMETHYLGlycine
L5      0 L3 AND L4

      FILE 'REGISTRY' ENTERED AT 06:41:38 ON 19 AUG 2002
          E GLYPHOSATE
          E GLYPHOSATE/CN
L6      1 E3
L7      17 DL1

      FILE 'CAPLUS' ENTERED AT 06:42:42 ON 19 AUG 2002
L8      4187 L6

=> 13 and 18
L9      1 L3 AND L8

=> d 19 ti

L9      ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
TI      Reaction systems for n-(phosphonomethyl)glycine production

=> glycine
      115498 GLYCINE
      1539 GLYCINES
L10     116166 GLYCINE
          (GLYCINE OR GLYCINES)

=> 13 and 110
L11     3 L3 AND L10

=> d 111 12-3 ti fbib abs
'12-3' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB
ALL ----- BIB, AB, IND, RE
APPS ----- AI, PRAI
BIB ----- AN, plus Bibliographic Data and PI table (default)
CAN ----- List of CA abstract numbers without answer numbers
CBIB ----- AN, plus Compressed Bibliographic Data
DALL ----- ALL, delimited (end of each field identified)
DMAX ----- MAX, delimited for post-processing
FAM ----- AN, PI and PRAI in table, plus Patent Family data
FBIB ----- AN, BIB, plus Patent FAM
IND ----- Indexing data
IPC ----- International Patent Classifications
```

MAX ----- ALL, plus Patent FAM, RE
PATs ----- PI, SO
SAM ----- CC, SX, TI, ST, IT
SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;
SCAN must be entered on the same line as the DISPLAY,
e.g., D SCAN or DISPLAY SCAN)
STD ----- BIB, IPC, and NCL

IABS ----- ABS, indented with text labels
IALL ----- ALL, indented with text labels
IBIB ----- BIB, indented with text labels
IMAX ----- MAX, indented with text labels
ISTD ----- STD, indented with text labels

OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations
SIBIB ----- IBIB, no citations

HIT ----- Fields containing hit terms
HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)
containing hit terms
HITRN ----- HIT RN and its text modification
HITSTR ----- HIT RN, its text modification, its CA index name, and
its structure diagram
HITSEQ ----- HIT RN, its text modification, its CA index name, its
structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
structure diagram, plus NTE and SEQ fields
KWIC ----- Hit term plus 20 words on either side
OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

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ENTER DISPLAY FORMAT (BIB):ens
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The following are valid formats:

ABS ----- GI and AB
ALL ----- BIB, AB, IND, RE
APPS ----- AI, PRAI
BIB ----- AN, plus Bibliographic Data and PI table (default)
CAN ----- List of CA abstract numbers without answer numbers
CBIB ----- AN, plus Compressed Bibliographic Data
DALL ----- ALL, delimited (end of each field identified)
DMAX ----- MAX, delimited for post-processing
FAM ----- AN, PI and PRAI in table, plus Patent Family data

FBIB ----- AN, BIB, plus Patent FAM
IND ----- Indexing data
IPC ----- International Patent Classifications
MAX ----- ALL, plus Patent FAM, RE
PATS ----- PI, SO
SAM ----- CC, SX, TI, ST, IT
SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;
SCAN must be entered on the same line as the DISPLAY,
e.g., D SCAN or DISPLAY SCAN)
STD ----- BIB, IPC, and NCL

IABS ----- ABS, indented with text labels
IALL ----- ALL, indented with text labels
IBIB ----- BIB, indented with text labels
IMAX ----- MAX, indented with text labels
ISTD ----- STD, indented with text labels

OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations
SIBIB ----- IBIB, no citations

HIT ----- Fields containing hit terms
HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)
containing hit terms
HITRN ----- HIT RN and its text modification
HITSTR ----- HIT RN, its text modification, its CA index name, and
its structure diagram
HITSEQ ----- HIT RN, its text modification, its CA index name, its
structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
structure diagram, plus NTE and SEQ fields
KWIC ----- Hit term plus 20 words on either side
OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.

ENTER DISPLAY FORMAT (BIB):end

=> d 111 1-3 ti fbib abs

L11 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Reaction systems for n-(phosphonomethyl)**glycine** production
AN 2001:886139 CAPLUS
DN 136:8084
TI Reaction systems for n-(phosphonomethyl)**glycine** production
IN Haupfear, Eric; Heise, Jerald; Jorgenson, Amy I.; Rogers, Michael; Chien, Henry; Casanova, Eduardo; Hooper, William B.; Wittler, Kent; Scholle,

PA William; Arhancet, Juan
Monsanto Technology, Llc, USA; et al.
SO PCT Int. Appl., 347 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001092272	A2	20011206	WO 2001-US10826	20010522
	WO 2001092272	A3	20020516		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				US 2000-206562PP 20000522
					US 2000-220140PP 20000721
					US 2000-230240PP 20000901
	US 2002068836	A1	20020606	US 2001-863885	20010522
					US 2000-206562PP 20000522
					US 2000-220140PP 20000721
					US 2000-230240PP 20000901

OS MARPAT 136:8084

AB A liq.-phase oxidn. processes for making N-(phosphonomethyl) **glycine** (also known in the agricultural chem. industry as **glyphosate**) and related compds, relates to processes wherein an N-(phosphonomethyl)iminodiacetic acid (NPMIDA) substrate (i.e., N-(phosphonomethyl)iminodiacetic acid, a salt of N-(phosphonomethyl)iminodiacetic acid, or an ester of N-(phosphonomethyl)iminodiacetic acid) is continuously oxidized to form an N-(phosphonomethyl) **glycine** product (i.e., N-(phosphonomethyl) **glycine**, a salt of N-(phosphonomethyl) **glycine**, or an ester of N-(phosphonomethyl) **glycine**), which, in turn, is crystd. (at least in part) in an **adiabatic crystallizer**.

L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS

TI Ultrafine ceria powders via **glycine**-nitrate combustion
AN 2001:877262 CAPLUS

DN 136:41416

TI Ultrafine ceria powders via **glycine**-nitrate combustion

AU Purohit, R. D.; Sharma, B. P.; Pillai, K. T.; Tyagi, A. K.

CS Powder Metallurgy Division, Bhabha Atomic Research Centre, Navi Mumbai, 400 705, India

SO Materials Research Bulletin (2001), 36(15), 2711-2721

CODEN: MRBUAC; ISSN: 0025-5408

PB Elsevier Science Inc.

DT Journal

LA English

AB The ultrafine ceria powders were prep'd. by the combustion technique using **glycine** as a fuel and nitrate as an oxidizer. The auto-ignition (at .apprxeq.200.degree.) of the viscous liqs. contg. cerium nitrate and **glycine** resulted in voluminous ceria powders. An interpretation based on an **adiabatic** flame temp., for different fuel-to-oxidant

ratios, was proposed for the nature of combustion and its correlation with the powder characteristics. The combustion synthesized ceria powders were characterized by XRD, HRTEM, surface area anal., and sinterability. Sp. surface area and primary **crystallite** size of the ceria powder obtained through fuel-deficient precursor was found to be .apprxeq.75 m²/g and 2.5-12 nm, resp. The powder, when cold pressed and sintered in air at 1250.degree. for 1 h, attained the sintered d. .apprxeq.94% of its theor. d., with submicron grain size.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Effect of an electric field on the elastic constants of **glycine** sulfate
AN 1960:95211 CAPLUS
DN 54:95211
OREF 54:17998i,17999a-b
TI Effect of an electric field on the elastic constants of **glycine** sulfate
AU Gilletta, Francis
CS Lab. Phys. Orsay, Fr.
SO Compt. rend. (1960), 250, 3162-4
DT Journal
LA Unavailable
AB Elastic consts. of **cryst.** (NH₂CH₂CO₂H)₃H₂SO₄ were estd. by excitation of the resonant frequency with an alternating elec. field parallel to the ferroelec. axis OY. The **adiabatic** compliance in the OX direction (s₁₁ .times. 10¹³ sq. cm./dyne) increased from approx. 30 at -140.degree. to 42 at 50.degree., the transition temp. Corresponding values of s₃₃ in the OZ direction were 67 to 110. Between 50.degree. and 70.degree., s₁₁ rose from 36 to 37, and s₃₃ was const. at 72.
Application of a d.c. elec. field of 300-2300 v./cm. altered the resonant frequency, and above 50.degree. the effect persisted as long as 24 hrs. after the electrodes were disconnected. The normal frequency was regained at once if the electrodes were short-circuited with Ag paint. G. suggests that the d.c. field induces space charges that influence the polarization of the crystal.

-> **adiabatic** **crystalizer**
37870 ADIABATIC
51 ADIABATICS
37904 ADIABATIC
(ADIABATIC OR ADIABATICS)
4704 CRYSTALLIZER
1727 CRYSTALLIZERS
5440 CRYSTALLIZER
(CRYSTALLIZER OR CRYSTALLIZERS)
L12 4 ADIABATIC CRYSTALLIZER
(ADIABATIC(W) CRYSTALLIZER)

=> d 112 1-4 ti fbib abs

L12 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS
 TI Reaction systems for n-(phosphonomethyl)glycine production
 AN 2001:886139 CAPLUS
 DN 136:8084
 TI Reaction systems for n-(phosphonomethyl)glycine production
 IN Haupfear, Eric; Heise, Jerald; Jorgenson, Amy I.; Rogers, Michael; Chien, Henry; Casanova, Eduardo; Hooper, William B.; Wittler, Kent; Scholle, William; Arhancet, Juan
 PA Monsanto Technology, Llc, USA; et al.
 SO PCT Int. Appl., 347 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001092272	A2	20011206	WO 2001-US10826	20010522
	WO 2001092272	A3	20020516		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			US 2000-206562PP	20000522
				US 2000-220140PP	20000721
				US 2000-230240PP	20000901
	US 2002068836	A1	20020606	US 2001-863885	20010522
				US 2000-206562PP	20000522
				US 2000-220140PP	20000721
				US 2000-230240PP	20000901
OS	MARPAT 136:8084				
AB	A liq.-phase oxidn. processes for making N-(phosphonomethyl)glycine (also known in the agricultural chem. industry as glyphosate) and related compds, relates to processes wherein an N-(phosphonomethyl)iminodiacetic acid (NPMIDA) substrate (i.e., N-(phosphonomethyl)iminodiacetic acid, a salt of N-(phosphonomethyl)iminodiacetic acid, or an ester of N-(phosphonomethyl)iminodiacetic acid) is continuously oxidized to form				
an	N-(phosphonomethyl)glycine product (i.e., N-(phosphonomethyl)glycine, a salt of N-(phosphonomethyl)glycine, or an ester of N-(phosphonomethyl)glycine), which, in turn, is crystd. (at least in part) in an adiabatic crystallizer .				

LA Polish

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	PL 146177	B1	19890131	PL 1985-255102	19850821
AB	Caprolactam is purified by a 2-stage vacuum crystn. process in which water				
	is evapd. in 2 adiabatic crystallizers at 100-200 kg H ₂ O/m ² -h and crystal suspension concn. .1toreq.15% in the 1st stage and 40-60 kg H ₂ O/m ² -h and .1toreq.30%, resp., in the 2nd stage. The crystallizer wall temps. in both stages are a few degrees above the soln. temps., and the residence time in each stage is .gtoreq.60 min after which				

the crystal suspension from the 2nd stage is stirred slowly for .gtoreq.30 min before recovery and washing of the crystals.

L12 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS

TI Continuous crystallization in column

AN 1977:425360 CAPLUS

DN 87:25360

TI Continuous crystallization in column

IN Antosova, Jaroslava; Prochazka, Lubomir; Ryttnauer, Emil; Vondrus, Stanislav

PA Czech.

SO Czech., 3 pp.

CODEN: CZXXA9

DT Patent

LA Czech

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 164726	B	19751128	CS 1974-1988	19740320
AB	The app. consisting of an adiabatic crystallizer , a descending column without scrapers for walls, and a lower melter operates under adiabatic cooling of the crystg. mixt. caused by evapn. of a natural				
	or added component of the mixt. Rough crystals of the higher melting component pass through the column and are countercurrently washed with a part of the product fused in the melter. The method gave >250 g/h of bisphenol A contg. <0.5% PhOH from a mixt. contg. 30% PhOH. A part of the				
	PhOH was evapd. at 3.7 kN/m ² for cooling.				

L12 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS

TI Batch vāčuum crystallization

AN 1958:13713 CAPLUS

DN 52:13713

OREF 52:2466g-i

TI Batch vacuum crystallization

AU Pegoraro, Mario

CS Milan Polytech. Inst.

SO Ingegnere (Milan) (1957), 31, 917-22

DT Journal

LA Unavailable

AB A method is presented for calcg. the yield of crystals obtained and the amt. of solvent evapd. during an adiabatic batch vacuum crystn. process conducted on a 2-component soln. (solvent plus solute) which is initially satd. By use of energy and material balances, a 1st-order linear

differential equation is derived which can be solved graphically by the method of isoclines. The method is illustrated for the case of an aq. succinic acid soln. From the relations derived, a method is suggested for

the exptl. detn. of the heat of crystn. as a function of temp. which requires only the measurement of the solvent evapd. as a function of temp.

in an **adiabatic crystallizer**. Tests conducted on a satd. aq. soln. of succinic acid in a small glass **adiabatic crystallizer** showed good agreement between calcd. and exptl. values.

=> adiabatic cryst?

37870 ADIABATIC
51 ADIABATICS
37904 ADIABATIC
(ADIABATIC OR ADIABATICS)
1680558 CRYST?
L13 26 ADIABATIC CRYST?
(ADIABATIC(W)CRYST?)

=> d 113 10-26 ti

L13 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Development of high pressure crystallization

L13 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Continuous production of anhydrous crystalline zinc dichloride

L13 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI A pilot study of p-cresol crystallization by adiabatic application of high pressure

L13 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Kinetics of the crystallization of nylon 6 in anionic adiabatic polymerization

L13 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Adiabatic potential of near-surface impurities

L13 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Adiabatic calorimetry as a method for determining crystal structures

L13 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Role of **adiabatic crystallization** and progressive melting in the origin of the Younger Granites-Sara-Fier Complex

L13 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Continuous crystallization in column

L13 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Crystallization of pentaerythritol

L13 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Dielectric dispersion of ferroelectric triglycine sulfate in the microwave region

L13 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Single-crystal elastic properties of tungsten from 24.degree. to 1800.degree.

L13 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI An interpretation of the kinetics of nonisothermal crystallization of polymers demonstrated on the **adiabatic crystallization** of polycaprolactam

L13 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Use of the Pomeranchuk effect for obtaining ultra-low temperatures

L13 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Alkaline polymerization of 6-caprolactam. XII. Polymerization of 6-caprolactam and crystallization of the polymer under adiabatic conditions

L13 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Heat calculations for a crystallizer with air cooling

L13 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI **Adiabatic crystallization** of amorphous polycaprolactam

L13 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Batch vacuum crystallization

=> d 113 1-9 ti

L13 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Oscillations of atomic nuclei in crystals

L13 ANSWER 2 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Multiple crystallization method for the purification of an .alpha.-hydroxycarboxylic acid on an industrial scale

L13 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Extractive and crystallization method for the purification of .alpha.-hydroxycarboxylic acids on an industrial scale

L13 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Reaction systems for n-(phosphonomethyl)glycine production

L13 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Test of the adiabatic nucleation theory in metallic and chalcogenide glasses

L13 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Paragenetic evolution of cassiterite-bearing lodes at South Crofty mine, Cornwall, United Kingdom

L13 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Test of the adiabatic nucleation model in chalcogenide glasses

L13 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Regenerating acid baths for coagulating viscose in manufacture of rayon

L13 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2002 ACS

TI Caprolactam purification and apparatus therefor

=> logoff hold			
COST IN U.S. DOLLARS	SINCE FILE	TOTAL	
	ENTRY	SESSION	
FULL ESTIMATED COST	35.38	51.60	
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL	
CA SUBSCRIBER PRICE	ENTRY	SESSION	
	-4.34	-4.34	

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 06:48:23 ON 19 AUG 2002

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal623paz

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 07:27:00 ON 19 AUG 2002
FILE 'CAPLUS' ENTERED AT 07:27:00 ON 19 AUG 2002
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COST IN U.S. DOLLARS	SINCE FILE	TOTAL	
	ENTRY	SESSION	
FULL ESTIMATED COST	35.78	52.00	
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL	
CA SUBSCRIBER PRICE	ENTRY	SESSION	
	-4.34	-4.34	

=> save temp all glyphsrch/l
L# LIST L1-L13 HAS BEEN SAVED AS 'GLYPHSRCH/L'

=> d his

(FILE 'HOME' ENTERED AT 06:40:07 ON 19 AUG 2002)

FILE 'CAPLUS' ENTERED AT 06:40:19 ON 19 AUG 2002
L1 37904 ADIABATIC
L2 744445 CRYSTALL?
L3 1001 L1(L)L2
L4 498 PHOSPHONOMETHYLGlycine
L5 0 L3 AND L4

FILE 'REGISTRY' ENTERED AT 06:41:38 ON 19 AUG 2002
E GLYPHOSATE
E GLYPHOSATE/CN

L6 1 E3
L7 17 DL1

FILE 'CAPLUS' ENTERED AT 06:42:42 ON 19 AUG 2002
L8 4187 L6

L9 1 L3 AND L8
L10 116166 GLYCINE
L11 3 L3 AND L10
L12 4 ADIABATIC CRYSTALLIZER
L13 26 ADIABATIC CRYST?
SAVE TEMP ALL GLYPHSRCH/L

=> save temp l3 adiacryst/a
ANSWER SET L3 HAS BEEN SAVED AS 'ADIACRYST/A'

=> logoff
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION	
FULL ESTIMATED COST	36.57	52.79	
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)		SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-4.34	-4.34	

STN INTERNATIONAL LOGOFF AT 07:28:26 ON 19 AUG 2002

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: ssspta1623paz

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 Apr 08 "Ask CAS" for self-help around the clock
NEWS 3 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4 Apr 09 ZDB will be removed from STN
NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and
IFIUDB
NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and
ZCAPLUS
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 9 Jun 03 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
saved answer sets no longer valid
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter (PHARMAL) - new on STN

NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 09 JAPIO to be reloaded August 25, 2002
NEWS 20 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)
now available on STN
NEWS 21 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 22 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,
CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002

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LAST RELOADED: Aug 16, 2002 (20020816/UP)

NAME	CREATED	NOTES/TITLE
ADIACRYST/A	TEMP	1001 ANSWERS IN FILE CAPLUS
ALKYLATIN/L	13 DEC 2001	9 L-NUMBERS
A408SRCH/L	TEMP	42 L-NUMBERS
GLYPHOSRCH/L	TEMP	12 L-NUMBERS
GLYPHSRCH/L	TEMP	13 L-NUMBERS
INDIUMCL3/A	30 MAY 2001	1 ANSWER IN FILE REGISTRY
LTWENTAUTGFOR/A	04 AUG 2001	72 ANSWERS IN FILE CAPLUS
NASTATINS/A	TEMP	144 ANSWERS IN FILE CAPLUS
NEOTAMECRYST/A	24 APR 2001	59 ANSWERS IN FILE CAPLUS
NVLARMFULGEN/A	19 APR 2001	196 ANSWERS IN FILE REGISTRY
POHBENZALDEH/A	10 JUL 2001	5519 ANSWERS IN FILE CAPLUS

PROCTYLCMPD/A	TEMP	10 ANSWERS IN FILE CAPLUS
PROCTYLSRCH/L	TEMP	4 L-NUMBERS
PROSTACMPD15/A	01 AUG 2001	34 ANSWERS IN FILE CAPLUS
STILLEAPP/L	07 JAN 2002	17 L-NUMBERS
TWOAMINOPOLY/Q	16 APR 2001	UPLOADED STRUCTURE

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FILE LAST UPDATED: 22 Aug 2002 (20020822/ED)

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```
=>
L1  ( 37904) SEA FILE=CAPLUS ABB=ON  PLU=ON  ADIABATIC
L2  ( 744445) SEA FILE=CAPLUS ABB=ON  PLU=ON  CRYSTALL?
L3      1001 SEA FILE=CAPLUS ABB=ON  PLU=ON  L1(L) L2
```

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==>

L4 (37904) SEA FILE=CAPLUS ABB=ON	PLU=ON	ADIABATIC
L5 (744445) SEA FILE=CAPLUS ABB=ON	PLU=ON	CRYSTALL?
L6 (	1001) SEA FILE=CAPLUS ABB=ON	PLU=ON	L4 (L) L5
L7 (	498) SEA FILE=CAPLUS ABB=ON	PLU=ON	PHOSPHONOMETHYLGlycine
L8 (	0) SEA FILE=CAPLUS ABB=ON	PLU=ON	L6 AND L7
L9 (	1) SEA FILE=REGISTRY ABB=ON	PLU=ON	GLYPHOSATE/CN
L10 (	17) SEA FILE=REGISTRY ABB=ON	PLU=ON	DL1
L11 (	4187) SEA FILE=CAPLUS ABB=ON	PLU=ON	L9
L12 (	1) SEA FILE=CAPLUS ABB=ON	PLU=ON	L6 AND L11
L13 (	116166) SEA FILE=CAPLUS ABB=ON	PLU=ON	GLYcine
L14 (	3) SEA FILE=CAPLUS ABB=ON	PLU=ON	L6 AND L13
L15 (	4) SEA FILE=CAPLUS ABB=ON	PLU=ON	ADIABATIC CRYSTALLIZER
L16 (26) SEA FILE=CAPLUS ABB=ON	PLU=ON	ADIABATIC CRYST?

=> file ca plus

'PLUS' IS NOT A VALID FILE NAME

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=> file caplus

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FILE COVERS 1907 - 24 Aug 2002 VOL 137 ISS 9
FILE LAST UPDATED: 22 Aug 2002 (20020822/ED)

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=> dl16 1-26 ti
0 DI:16

7216550 1
323741 26
291931 TI
915 TIS
292605 TI
(TI OR TIS)
L17 0 DL16 1-26 TI
(DL16(W)1(W)26(W)TI)

=> d 116 1-26 ti
L16 HAS NO ANSWERS
L16 (26)SEA FILE=CAPLUS ABB=ON PLU=ON ADIABATIC CRYST?

=> adiabatic cryst?
37894 ADIABATIC
51 ADIABATICS
37928 ADIABATIC
(ADIABATIC OR ADIABATICS)
L18 1681863 CRYST?
26 ADIABATIC CRYST?
(ADIABATIC(W)CRYST?)

=> d 118 10-26 ti

L18 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Development of high pressure crystallization

L18 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Continuous production of anhydrous crystalline zinc dichloride

L18 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI A pilot study of p-cresol crystallization by adiabatic application of high pressure

L18 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Kinetics of the crystallization of nylon 6 in anionic adiabatic polymerization

L18 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Adiabatic potential of near-surface impurities

L18 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Adiabatic calorimetry as a method for determining crystal structures

L18 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Role of **adiabatic crystallization** and progressive melting in the origin of the Younger Granites-Sara-Fier Complex

L18 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Continuous crystallization in column

L18 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Crystallization of pentaerythritol

L18 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Dielectric dispersion of ferroelectric triglycine sulfate in the microwave

region

L18 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Single-crystal elastic properties of tungsten from 24.degree. to 1800.degree.

L18 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI An interpretation of the kinetics of nonisothermal crystallization of polymers demonstrated on the **adiabatic crystallization** of polycaprolactam

L18 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Use of the Pomeranchuk effect for obtaining ultra-low temperatures

L18 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Alkaline polymerization of 6-caprolactam. XII. Polymerization of 6-caprolactam and crystallization of the polymer under adiabatic conditions

L18 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Heat calculations for a crystallizer with air cooling

L18 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI **Adiabatic crystallization** of amorphous polycaprolactam

L18 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Batch vacuum crystallization

=> d 118 26 ti fbib abs

L18 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Batch vacuum crystallization
AN 1958:13713 CAPLUS
DN 52:13713
OREF 52:2466g-i
TI Batch vacuum crystallization
AU Pegoraro, Mario
CS Milan Polytech. Inst.
SO Ingegnere (Milan) (1957), 31, 917-22
DT Journal
LA Unavailable
AB A method is presented for calcg. the yield of crystals obtained and the amt. of solvent evapd. during an adiabatic batch vacuum crystn. process conducted on a 2-component soln. (solvent plus solute) which is initially satd. By use of energy and material balances, a 1st-order linear differential equation is derived which can be solved graphically by the method of isoclines. The method is illustrated for the case of an aq. succinic acid soln. From the relations derived, a method is suggested for the exptl. detn. of the heat of crystn. as a function of temp. which requires only the measurement of the solvent evapd. as a function of temp. in an **adiabatic crystallizer**. Tests conducted on a satd. aq. soln. of succinic acid in a small glass **adiabatic crystallizer** showed good agreement between calcd. and exptl. values.

=> d 118 1-9 ti

L18 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Oscillations of atomic nuclei in crystals

L18 ANSWER 2 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Multiple crystallization method for the purification of an
.alpha.-hydroxycarboxylic acid on an industrial scale

L18 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Extractive and crystallization method for the purification of
.alpha.-hydroxycarboxylic acids on an industrial scale

L18 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Reaction systems for n-(phosphonomethyl)glycine production

L18 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Test of the adiabatic nucleation theory in metallic and chalcogenide
glasses

L18 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Paragenetic evolution of cassiterite-bearing lodes at South Crofty mine,
Cornwall, United Kingdom

L18 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Test of the adiabatic nucleation model in chalcogenide glasses

L18 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Regenerating acid baths for coagulating viscose in manufacture of rayon

L18 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Caprolactam purification and apparatus therefor

=> d 118 3 ti fbib abs

L18 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2002 ACS
TI Extractive and crystallization method for the purification of
.alpha.-hydroxycarboxylic acids on an industrial scale
AN 2002:220523 CAPLUS
DN 136:246494
TI Extractive and crystallization method for the purification of
.alpha.-hydroxycarboxylic acids on an industrial scale
IN Van Krieken, Jan; Van Breugel, Jan
PA Purac Biochem B.V., Neth.
SO PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002022545	A1	20020321	WO 2001-NL683	20010914
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

NL 2000-1016202A 20000915
AU 2002012811 A5 20020326 AU 2002-12811 20010914
NL 2000-1016202A 20000915
WO 2001-NL683 W 20010914

AB The title method involves: (a) subjecting an aq. stream contg. mainly .alpha.-hydroxycarboxylic acids [e.g., (S)-lactic acid] to an extn. step, with the formation of an aq. phase contg. mainly .alpha.-hydroxy acid;
(b) concg. the aq. phase contg. mainly the .alpha.-hydroxycarboxylic acids by means of evapn. of water under reduced pressure, with the formation of a concd. .alpha.-hydroxycarboxylic acid soln. in water; and (c) subjecting the concd. .alpha.-hydroxycarboxylic acid soln. to a crystn., with formation of pure .alpha.-hydroxycarboxylic acid, where (i) the concd. .alpha.-hydroxycarboxylic acid soln. is directly cooled in a melting crystn. device, and/or (ii) the concd. .alpha.-hydroxycarboxylic acid soln. is dild. with water and crystn. is brought about in one or more cooling crystn. devices and/or evaporative crystn. devices, and/or (iii) crystn. is brought about in one or more **adiabatic crystn** devices.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> 13 and glycine
115587 GLYCINE
1539 GLYCINES
116255 GLYCINE
(GLYCINE OR GLYCINES)
L19 3 L3 AND GLYCINE

=> d 119 1-3 ti

L19 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Reaction systems for n-(phosphonomethyl)**glycine** production

L19 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Ultrafine ceria powders via **glycine**-nitrate combustion

L19 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Effect of an electric field on the elastic constants of **glycine** sulfate

=>
=> logoff hold
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	ENTRY	SESSION
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
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	-1.24	-1.24

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